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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,798	08/22/2003	Takashi Kawaguchi	116914	8136

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,798

Applicant(s)

KAWAGUCHI, TAKASHI

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/22/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 and 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 4 recites an improper Markush group. It is suggested that either (i) in line 3 after “from”, the phrase “the group consisting of” is inserted or (ii) in line 4, “and” is changed to “or”.

(b) Claim 8 recites that the acrylic resin particles are “resin particles containing a main component of polyacrylic acid or polyacrylic acid ester”. The scope of the claim is confusing because it is not clear what is meant by “main component”. Must the acrylic resin contain certain amount of polyacrylic acid or polyacrylic acid ester? Clarification is requested.

Further, the scope of the claim is confusing because it is not clear how the acrylic resin contains a main component of a polymer, i.e. polyacrylic acid or polyacrylic acid ester. That is, resin is typically obtained from monomers, i.e. acrylic acid or acrylate. Clarification is requested.

(c) Claim 9 recites that the “ink set is in a form of ink cartridge”. The scope of the claim is confusing because it is not clear what is meant “in a form of ink cartridge”. How is the ink set

is in a form of ink cartridge? Does this refer to the ink set being contained in an ink cartridge?

Clarification is requested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ma et al. (U.S. 6,540,329).

Ma et al. disclose color ink set comprising (i) black ink comprising water, solvent, black pigment, resin having carboxyl group, and pH adjusting agent, i.e. organic amine and (ii) colored ink comprising water, solvent, coloring pigment, resin obtained from sulfopropyl acrylate, and pH adjusting agent, i.e. organic acid. It is disclosed that the black ink possesses pH of about 8 while the colored ink includes magenta ink possessing pH of about 3 and yellow ink comprising pH of 2.5-4. There is further disclosed ink cartridge containing the ink set (col.1, lines 13-15, col.4, lines 20-35 and 40-57, col.5, lines 10-21, col.6, lines 1-8 and 25-28, col.7, lines 36-40, col.8, lines 21-23, 39-44, and 48, col.9, lines 41-col.10, line 15, and col.12, lines 11-34). It is noted that the disclosure that the pH of the black ink is “about” 8 clearly encompasses presently claimed pH in claim 2 of 8.7.

In light of the above, it is clear that Ma et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (U.S. 6,247,808) in view of Carlson et al. (U.S. 6,136,890).

The disclosure with respect to Ma et al. in paragraph 4 above is incorporated here by reference.

The difference between Ma et al. and the present claimed invention is the requirement in the claims of specific resin.

Carlson et al., which is drawn to ink jet inks, disclose the use of polyurethane comprising carboxyl groups in order to minimize aggregation and flocculation of pigment (col.2, lines 34-39, col.6, lines 9-42, and col.7, lines 25-37).

In light of the motivation for using polyurethane comprising carboxyl groups disclosed by Carlson et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polyurethane in the ink jet ink of Ma et al. in order to prevent aggregation and flocculation of the pigment, and thereby arrive at the claimed invention.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takuhara et al. (U.S. 6,706,104) discloses ink set comprising black ink possessing pH of 8-11 and color ink possessing pH of 3-6, however, the color ink comprises dye not pigment as required in the present claims.

Kaneko et al. (U.S. 6,540,329) disclose ink set comprising black ink possessing pH of 7-11 and color ink possessing pH of 3-6, however, there is no disclosure that the color ink comprises pH adjustor or resin particles as required in the present claims.

Ichizawa et al. (U.S. 5,900,899) disclose ink set comprising black ink possessing pH of 8-11 and colored ink possessing pH of 6-9 which falls outside the scope of the claimed pH for the colored ink.

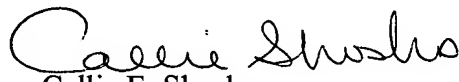
Takizawa et al. (U.S. 5,990,227) disclose ink set comprising black ink comprising pH of 8-13 and color ink comprising pH of 1-6, however, the inks comprise dye not pigment as required in the present claims.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
8/8/05